AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method for obtaining a substantially pure population of hematopoietic stem cells, comprising:

(a) contacting a biological sample comprising cells with an affinity agent which binds to endothelial protein C receptor (EPCR) under conditions appropriate for binding to occur; and

(b) separating cells that bind to the affinity agent from cells that do not bind to the affinity agent, thereby producing a substantially pure population of hematopoietic stem cells.

2. (Previously presented) The method of claim 1, wherein the affinity agent is an antibody or fragment thereof.

3. (Previously presented) The method of claim 1 or 2, wherein the step of separating cells is performed by a method selected from the group consisting of: column chromatography, fluorescence-activated cell sorting, magnetic bead separation and direct immune adherence.

4. (Previously presented) The method of any one of claims 1-3, wherein the biological sample comprising cells is selected from the group consisting of: bone marrow cells, embryonic yolk sac, fetal liver, fetal and adult spleen and blood.

5. (Previously presented) A substantially pure population of hematopoietic stem cells isolated by a method of any one of claims 1-4.

6. (Currently amended) A method for obtaining a substantially pure population of EPCR+ cells, comprising:

(a) contacting a biological sample comprising cells with an affinity agent which binds to the endothelial protein C receptor (EPCR) under conditions appropriate for binding to occur; and

(b) separating cells that bind to the affinity agent from cells that do not bind to the affinity agent, thereby producing substantially pure population of EPCR+ cells.

7. (Previously presented) The method of claim 6, wherein the affinity agent is an antibody or fragment thereof.

8. (Previously presented) The method of claim 6 or 7, wherein the step of separating cells is performed by a method selected from the group consisting of: column chromatography, fluorescence-activated cell sorting, magnetic bead separation and direct immune adherence.

9. (Previously presented) The method of any one of claims 6-8, wherein the biological sample comprising cells is selected from the group consisting of: bone marrow cells, embryonic yolk sac, fetal liver, fetal and adult spleen and blood.

10. (Previously presented) The method of claim 9, wherein the EPCR+ cells are human EPCR+ cells.

11. (Previously presented) The method of claim 9, wherein the EPCR+ cells are murine EPCR+ cells.

12. (Previously presented) A substantially pure population of hematopoietic stem cells consisting essentially of EPCR+ cells.

13. (Withdrawn) A method for treating a subject using hematopoietic stem cell transplantation, comprising: implanting into the subject the substantially pure population of human hematopoietic stem cells of claim 5 or 12.